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**WO0167828A1: LAMP DEVICE AND DEVICE FOR DRIVING DISCHARGE LAMP**

**WO0167828A1:**  
**LAMP DEVICE AND DEVICE FOR DRIVING DISCHARGE LAMP**

**Title:** Lamp device and device for driving discharge lamp with an auxiliary power supply

**Country:**

**Kind:** WO World Intellectual Property Organization (WIPO)

**Inventor:** KISAICHI, Hiroyasu; c/o MITSUBISHI DENKI KABUSHIKI KAISHA,  
2-3, Marunouchi 2-chome, Chiyoda-ku, Tokyo 100-8310, Japan

ASAYAMA, Masatomi; c/o OSRAM-MELCO LIMITED, 8-29, Kita-Saiwai 2-chome, Nishi-ku, Yokohama-shi, Kanagawa 220-0004, Japan

**Assignee:** OSRAM-MELCO LIMITED, 8-29, Kita-Saiwai 2-chome, Nishi-ku, Yokohama-shi, Kanagawa 220-0004, Japan

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**Abstract:** WO0167828A1

A stepup and stepdown converter (3) includes a transformer (3a), a first switching element (3b) connected in series with the primary of the transformer (3a) connected to AC power line (1), a first diode (3c) connected with the secondary of the transformer (3a), and a first capacitor (3d). Zero cross detector means (10) detects a zero crossing point of the voltage of AC line (1). An auxiliary power circuit (4) includes a second diode (4a) connected to the connection between the transformer (3a) and the first switching element (3b). The auxiliary power circuit charges a second capacitor (4c) through a second diode (4a) with the energy stored in the primary winding of the transformer (3a), and supplies the energy stored in the second capacitor (4c) to a discharge lamp (8) through a second switching element (4b), a third diode (4f), and an inductor (4e). Based on the output from the zero cross detector means (10), a control circuit (9) drives the second switching element (4b) of the auxiliary power circuit (4) for a predetermined period before and after a zero crossing point. [French] [Japanese]

**Attorney, Agent or Firm:** KOBAYASHI, Hisao ;